AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Withdrawn) A digital video recorder comprising:

>an analog video decoder having an analog to digital converter and an input for receiving analog video signals;

>an analog video encoder having a digital to analog converter and an output for transmitting analog video signals;

>at least one digital disk for storing and playing back video data; and

>a video compression encoder and decoder connected through a multiport memory controller to said at least one digital disk; and

>a synchronizing time generator;

>wherein said multiport memory controller comprises a field programmable gate array.

2. (Cancelled)

3. (Cancelled)

4. (Previously Presented) The method of claim 7, further comprising: deallocating at least some of the addresses from the index.

5. (Withdrawn) In a digital video recorder, a method for allocating memory cycles to dynamically adjust for unpredictable data flow requirements, the recorder having multiple ports, multi-level port request logic, arbitration logic and sequencing logic; the method comprising the steps of:

>a) using said port request logic to examine data flow, develop an estimate of the urgency for port service and presenting a multi-level request to the arbitration logic, said request representing the estimated level of data urgency;

>b) employing said arbitration logic to examine requests from all ports to select one port having the highest urgency level, generate port selection signals and send a start of cycle signal to said sequencing logic;

c) generating in said sequencing logic, control signals to cycle memory and transfer data;

d) transferring data from the selected port to and from memory under control of the sequencing logic;

e) terminating the current cycle upon completion of data transfer; and

f) using said arbitration logic to select a port for the next cycle.

6. (Withdrawn) A method for dynamically metering compressed video data rates to accommodate maximum disk data rates in a digital video recorder hard disk without dropping frames during recording; the method comprising the steps of:

a) statistically monitoring disk performance;

b) comparing said performance to the video frame rate to determine the disk's actual maximum data rate in real time;

c) reprogramming the compression target data rate to the maximum disk supportable data rate in the event that the disk cannot sustain a configured data rate; and

d) iteratively repeating step c) continuously adjusting compression data rate to the lesser of maximum disk data rate and selected compression level.

7. (Currently Amended) A method of recording a digital data, comprising:

providing a memory;

using an index to store different addresses of the memory for each of a plurality of sequential frames of the data recorded in a digital format;

retrieving at a least a portion of the data by accessing the memory addresses from the index;

looping the ~~data on the~~ memory automatically by overwriting a portion of at least one of (a) the ~~memory~~ data and (b) the memory addresses; and

providing a loop remnant directory to determine a changing deallocation point.

8. (Previously Presented) The method of recording of claim 7, wherein the index identifies individual ones of the plurality of frames using at least one of frame number, time, and date.

9. (Previously Presented) The method of recording of claim 7, wherein the different addresses are start addresses.

10. (Previously Presented) The method of recording of claim 7, further comprising storing individual ones of the plurality of sequential frames in a digital format.

11. (Previously Presented) The method of recording of claim 7, wherein the index comprises a table.

12. (Previously Presented) The method of recording of claim 7, further comprising using the index to identify addresses that can be overwritten.

13. (New) The method of recording of claim 7, wherein looping the memory automatically comprises overwriting a portion of at least one of (a) the data and (b) the memory addresses immediately after the available disk space is exhausted.

14. (Currently Amended) The method of recording of claim 7, ~~further comprising~~ wherein overwriting a portion of the data comprises ~~memory used to store~~ replacing an earlier one of the plurality of sequential frames with a later one of the plurality of sequential frames, and recording corresponding information in the index.

15. (Currently Amended) A method of recording a digital data, comprising:
    providing a memory;
    using an index to store different addresses of the memory for each of a plurality of
        sequential frames of the data in a digital format;
    retrieving at a least a portion of the data by accessing the memory addresses from the
        index;
    looping the ~~data on the~~ memory automatically by overwriting a portion of at least one of
        the ~~memory~~ data and the memory addresses;
    allocating a portion of the memory to prevent it from being overwritten by subsequent
        recording in the loop; and
    providing a loop remnant directory to determine a changing deallocation point.

16. (Previously Presented) The method of recording according to claim 15, further comprising continuing to record the image data immediately after allocating a portion of the memory.